ARTHUR ANDERSEN'S VIEW OF INTEGRATION MARKETS

ROBERT H. MEIXNER, JR.
Partner

ARTHUR ANDERSEN

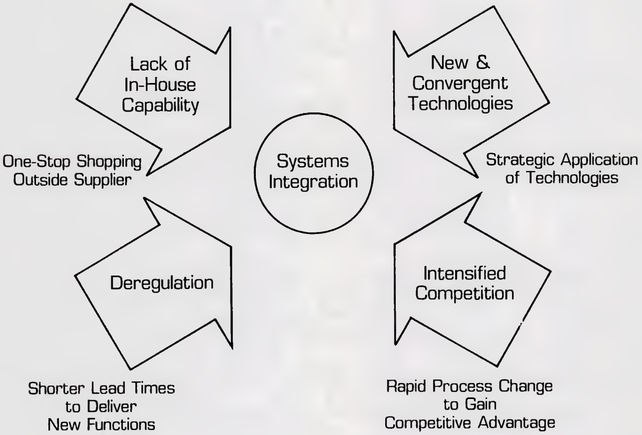
INPUT

NOTES:

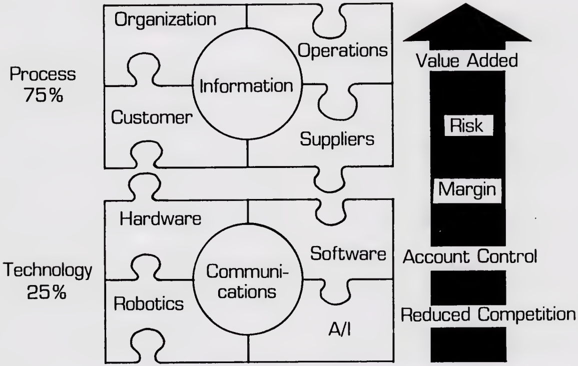
RISKS

- Guaranteed Performance
  - Business Solution
- Investment in
  - Marketing
  - Financing
  - Technology
  - Facilities
- Long Time Frames

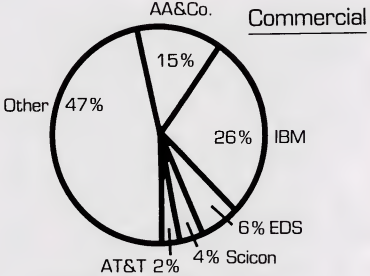
FORCES DRIVING SI



LEVELS OF INTEGRATION



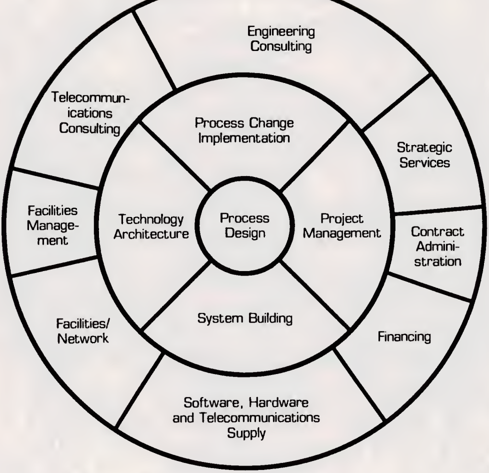
CURRENT POSITION — 1986 SALES



Total Contract Sales: $2.7B
Prof. Svcs.: $1.5B

Source: Input

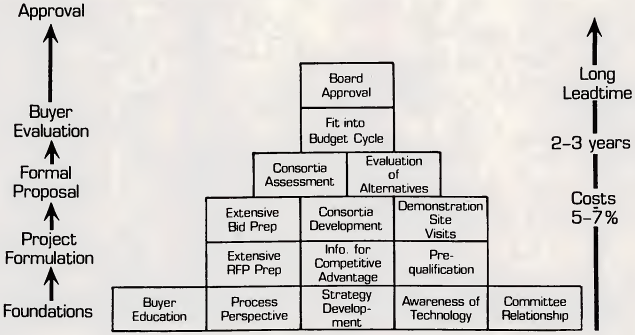
SI CAPABILITIES



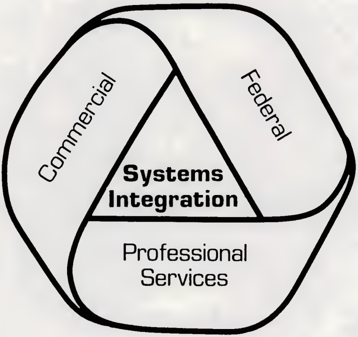
BARRIERS TO ENTRY

- Risk Assumption
- Image Consistent with Buyer Values
- Business Process Expertise
- Systems Building Skills
- Professional Services Culture
- Emerging Economies of Scale
  - — Training
  - — Technology Developments
  - — Marketing
- Capital
- Top Management Access

KEY ASPECTS OF TYPICAL BUYING PROCESS



ARTHUR ANDERSEN & CO.'S VIEW OF INTEGRATION MARKETS



ARTHUR ANDERSEN & CO.'s VIEW OF INTEGRATION MARKETS

- Definition and Market Overview
- Industry Structure
  - Current Players
  - External Forces
- Critical Success Factors
- Strategies

ARTHUR ANDERSEN & CO. PERSPECTIVE

- Worldwide Professional Services Firm
- Pioneer in Information Consulting
- Steeped in Culture
- Annual Consulting Growth 30%
  — $1 Billion
  — 11,000 Consulting Professionals
- Business Solutions for Top Executives

A SUCCESSFUL BUSINESS SOLUTION

"Our inability to manage was bringing us to our knees. We are now handling our business in a very professional manner."

Donald F. Johnstone, President
North American Philips
Consumer Electronics Corp.

SI CHARACTERISTICS

ESSENTIAL

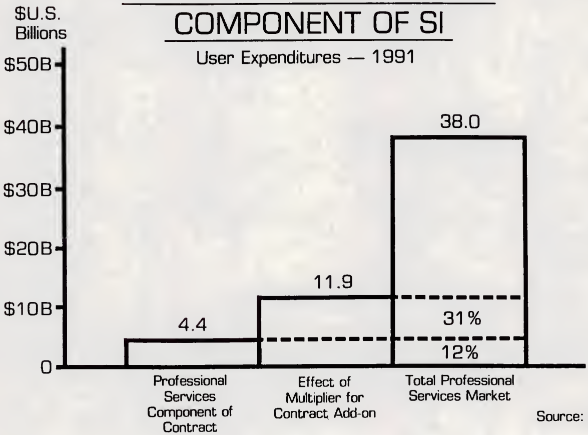
- ☑ Comprehensive End-to-End Solution
- ☑ Primary Vendor Responsibility for Solution Delivery
- ☑ Risk Assumption
- ☑ Complex and Multidisciplinary Systems
- ☑ Networking and Communications
- ☑ Contract and Project Management

TYPICAL

- Others Supply Specific Components
- Fixed Price and Schedule
- Value of Information Content
  - Min. [1986]: $2 Million
  - Avg. [1991]: $40 Million
- Significant Follow-on [2x Original Contract Value]
- Average Contract Life 3–7 Years

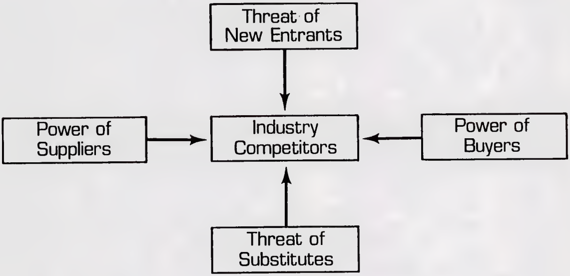
COMPARISON OF PROFESSIONAL SERVICES COMPONENT OF SI

User Expenditures — 1991

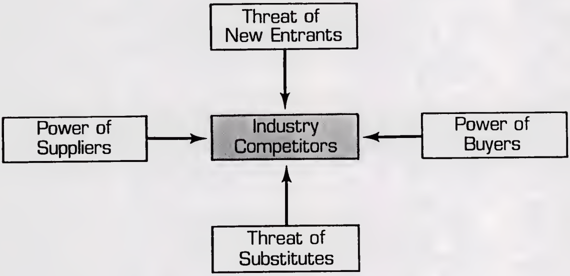


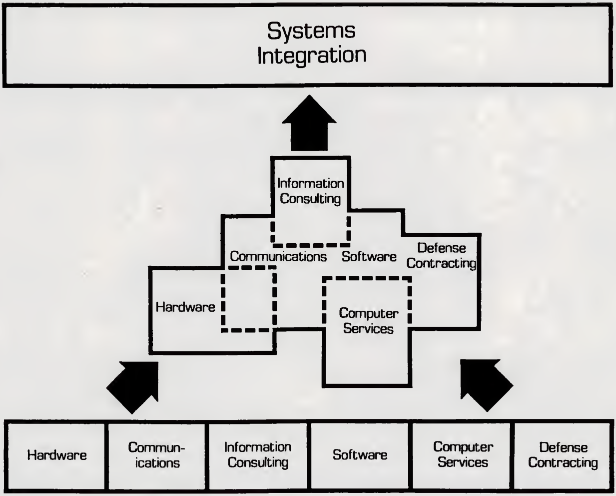
Source: Input

INDUSTRY STRUCTURE



INDUSTRY STRUCTURE




Systems
Integration
Information
Consulting
Communications
Software
Defense
Contracting
Hardware
Computer
Services
Hardware
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Information
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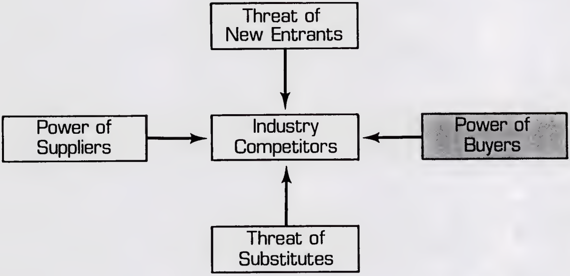
Software
Computer
Services
Defense
Contracting

INDUSTRY STRUCTURE



WHO ARE THE BUYERS?

- Typically a Committee
- Operations Executive Usually Leads
- CIO Is a Procurement Officer
- Influenced by CEO
- CFO Is Supporter

BUYER VALUES

Marketing and Distribution System

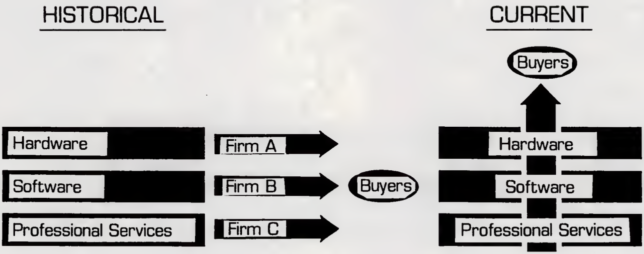
Passenger Information System

Plan, Implement and Support Enterprise Business Systems

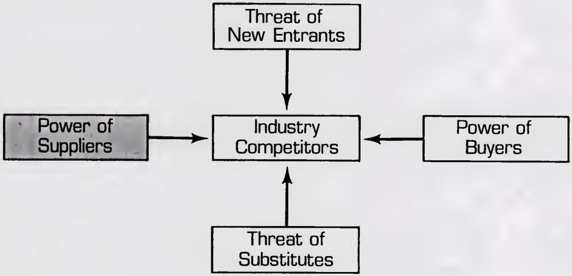
BUYER VALUES

- Track Record
- Innovative Business Solution
- Approach, Tools, Technology Centers
- Top Management Commitment to Long-Term Relationships
- Guaranteed Benefit Schedule

BUYING PROCESS



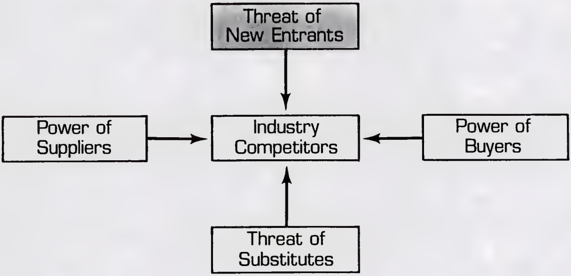
INDUSTRY STRUCTURE



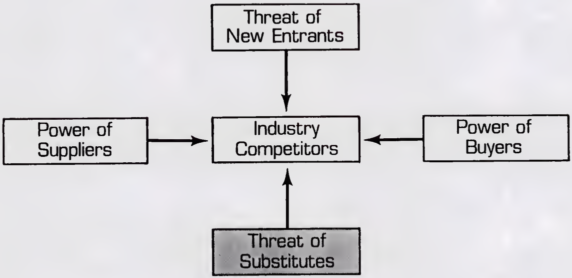
ROLE OF SUPPLIERS

- Suppliers Are Potentially Both Competitors and Customers
- Systems Integrators Are Important Distribution Channel for Suppliers
- Relationship with Suppliers Essential for:
  - Marketing
  - Image
  - Skills
  - Financing

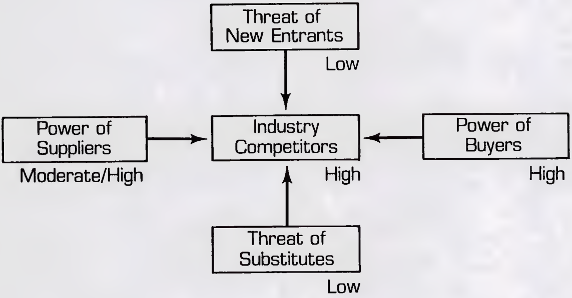
INDUSTRY STRUCTURE



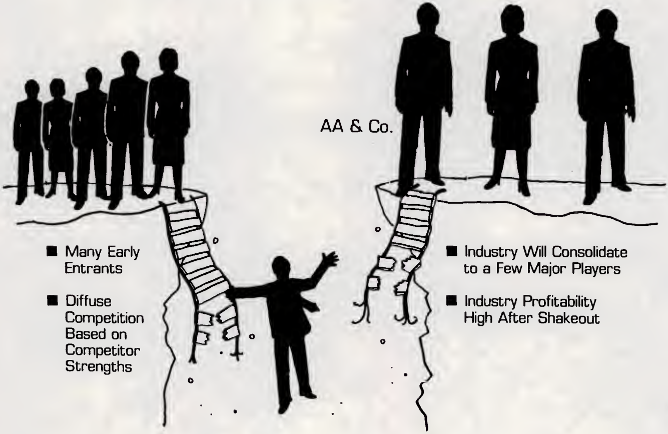
INDUSTRY STRUCTURE



INDUSTRY STRUCTURE
SYSTEMS INTEGRATION



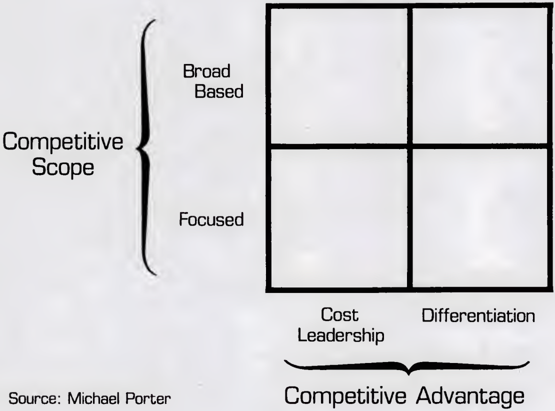
COMPETITIVE ENVIRONMENT



CRITICAL SUCCESS FACTORS

- Business Orientation
- Culture
- Marketing
- Critical Mass
- Technology
- Relationships

GENERIC STRATEGIES



Source: Michael Porter

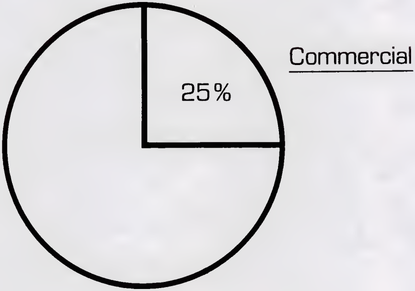
ARTHUR ANDERSEN & CO. VISION

Be the Preeminent Provider to
Top Organizations of:

1. End-to-End Business Process Solutions and the Leading Information Technology that Supports Them
2. Treating the Integrated Solutions as a Natural Consequence of the Need to Remain Competitive

MARKET SHARE OBJECTIVES

1992 SALES



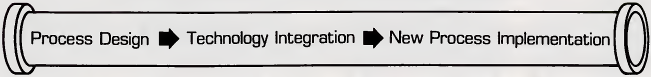
Total Contract Sales: $14.5B
Prof. Svcs.: $8.4B

INVESTMENTS

- Targets
  - — R&D
  - — Technology and Training Centers
  - — People
  - — Systems, Methods, Tools and Products
  - — Markets
  - — Acquisitions
- Level
  - — $1.5 Billion Over Next Five Years

STRATEGIES —
BUSINESS ORIENTATION

- Business Process Change
- Strategic Services
- Change Management Capability
- Mission Critical Areas
- Assumption of End-to-End Responsibility



STRATEGIES — CULTURE

- Top People
- Training
- "Will Do" Attitude
- Objectivity

STRATEGIES — MARKETING

- Industry-Oriented Marketing
- Client/Opportunity Targeting
- Nimbleness
- Entrepreneurship
- Access to Top Management
- Showcases

IMPACT '87

- 24,000 Square-Foot Mini-Factory
- State-of-the-Market Advanced Technologies
- Fully Integrated, On-Line Real Time Manufacturing Environment
- $18M of Hardware and Software
- Suppliers
  - Allen Bradley
  - Alliance Automation Systems
  - Cherry Electrical Products
  - Computer Methods Corporation
  - Denniston & Denniston
  - IBM
  - INTEL Corporation
  - Interactive Images
  - Intergraph Corp.
  - Pritsker & Associates
  - Rexnord Automation
  - Tandem Computers
  - Wes-Tech Automation Systems

STRATEGIES — CRITICAL MASS

- Ability to Mobilize, Concentrate and Deliver Resources
- Key Skills
  - Systems Building
  - Telecommunications
  - Engineering
  - Contract Administration
  - Project Management

STRATEGIES — TECHNOLOGY

- Proprietary Methods and Tools
- Advanced Technology Groups
- Systems Centers
- R&D Investment
- Proprietary Technologies

FOUNDATION

- The Only Completely Integrated Systems Development Product on the Market
- Addresses the Complete Life Cycle
  - — Planning
  - — Design
  - — Implementation
  - — Production Systems Support
  - — Project Management
- DB2

ADVANCED SYSTEMS CENTERS

STRATEGIES — RELATIONSHIPS

- Long-Term Client Relationships
  — Preemptive Positioning
- Superior Third-Party Management
- Alliances
- Acquisitions

SUPERIOR THIRD-PARTY MANAGEMENT

- Third-Party Management Function by Type
  — e.g., Software
- Partners Committed to Key Vendors as Advocates
- Joint Marketing Programs
- Tools Development
- Broad Industry and Geographic Coordination with Major Third Parties
- Standard Arrangements, Proposal Sections and Automated Interfaces with Key Third Parties
- Clearinghouse
- Competitor Intelligence Systems

WHAT AA&CO. OFFERS

- Senior Management Access
- Joint Marketing Strategy
- Advanced Systems Centers for Development/Production
- Focused Industry Skills
- Proposal Support
  - Flexible Teaming Arrangements
  - Prototyping Facilities
  - Technical Support Tools

KEY CONTACTS

OVERALL INTEGRATION TEAMING	John Oltman, Chicago
FEDERAL GOVERNMENT	Tom Ross, Washington, D.C.
MANUFACTURING	Bill Stoddard, Hartford
TELECOMMUNICATIONS	Bob Meixner, Chicago
STATE AND LOCAL GOVERNMENT	Roger Gelfenbien, Hartford
CAPITAL MARKETS	Mark Sternfeld, New York
DISTRIBUTION	Glen Terbeek, Chicago
INSURANCE	Tom Skelly, Houston
UTILITIES	Ed Lukes, Chicago
HEALTH CARE	Jay Toole, Atlanta
OIL & GAS	Walter Evans, New Orleans
AIRLINES	John Corsiglia, Chicago
BANKING	Chuck Petersen, Chicago

Robert H. Meixner, Jr.
Partner
ARTHUR ANDERSEN

Mr. Meixner is a partner in Arthur Andersen's Management Information Consulting Division. He joined the firm in 1973 after working as an engineer for McDonnell-Douglas Astronautics Company. He specializes in telecommunications where he is responsible for central U.S. practice and works with the RBOCs and large independent telephone companies. He is currently participating in Arthur Andersen's internal strategic planning for telecommunications and systems integration practices.

Mr. Meixner has a B.S. degree in Aerospace Engineering from the University of Illinois and M.S. degrees in Aerospace Engineering and Industrial Administration from Purdue University.